Coding assignment problem:

Assume a bin which has a width of 80 and height 40 in which 9 rectangles of random width and height have to be placed without overlap and within the bin optimally. Here are the constraints:

1. Rectangle no 1 and 2 are to be placed on the top and the bottom side of the bin.
2. Rectangle no 3 is to be placed close to 4, 5, 9
3. Rectangle no 7 is to be placed close to 6 and 2.
4. Remaining rectangle can be placed anywhere such that the area is optimal.
5. All rectangles have to have one unit separation between them.

Rules:

1. Python code needs to be created along with the plot and the weights to show the results.
2. Use Graphs neural networks to define the constraints. Use the algorithm to steer the Reinforcement learning or other meta heuristic algorithm for area optimisation.
3. Do share your end results.